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UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE
WASHINGTON, D.C.

Berkeley, California
December 23, 1944

LASSEN PARK INSECT CONTROL PROJECT
FALL 1944

FOREWORD

A survey carried out by J. E. Patterson and R. C. Hall of the Forest Insect Laboratory of the Bureau of Entomology and Plant Quarantine at Berkeley, California, in September 1944 revealed a damaging infestation of Jeffrey pine beetle and Ips in Jeffrey pine on the recreational areas of Lassen Park. The two main areas with the heaviest infestation were Lost Creek and Manzanita Lake units. This condition was reported to the National Park Service with recommendations that control by direct methods was necessary to prevent further losses. Upon these recommendations, Coffman and Sanford of the Park Service, together with Keen of the Forest Insect Laboratory, worked out a program whereby the Park Service would furnish the men and the Bureau of Entomology and Plant Quarantine would furnish the supervision and would be directly responsible for the work done.

Work was rushed on the Utility area at Manzanita Lake to provide housing facilities for the crew. One cabin was equipped for a mess hall and quarters for the cook with two cabins for dormitories. The cook was loaned to Lassen Park from Crater Lake Park. C. E. Startt from the Hat Creek field base was placed in charge of the camp and directly responsible for the project. M. E. Thede of the Park Service assisted in the initial phases of the organization of the project.

PROJECT

Camp opened October 16, 1944, and closed November 25, 1944. Due to the fact that the men were entirely inexperienced, it was decided not to break them up into two-man treating crews as is the common practice, but to use them as a five-man unit. These men were drawn from one of the Sequoia National Park's C.P.S. camps. Spotting was done by Startt and was so managed that trees were selected a day or two in advance of the crew who treated the trees by the prescribed control method of cutting, peeling and burning.

INSECTS INVOLVED

Since the size of the crew was small, Startt had time to make a stem analysis of each tree felled to determine if possible which insect or insects were responsible for the damage. These trees were also checked for root fungus, but this was found so rarely that it cannot be regarded as a contributing factor of tree mortality. The trees analyzed came under three groups:

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2- Regional Director
Staff
Superintendent

1. Trees previously top-killed by Ips oregoni and I. confusus and with the Ips and Dendroctonus jeffreyi in the lower stem. Pityogenes carinulatus was found associated with Ips in the tops.
2. Trees with Ips oregoni and I. confusus and Pityogenes carinulatus in the top section and lateral branches, with D.j. fill-in on the lower stem.
3. Trees with the above insects in the top with very few D.j. attacks in mid-stem with the lower stem being entirely green with no attacks.

A few decadent trees with dead or partially dead lateral branches were examined also. This was done by climbing the tree and removing the infested portion for examination. It was found that in the case of these dead laterals, they were heavily infested with Pityogenes and Ips. Several of the branches were attacked first in old mistletoe scars.

On this basis it would seem that insects which in the past have been considered secondary are primarily responsible for some of the general decadence of Jeffrey pine that have in the past been considered killed by D. j. In practically all cases the D. j. encountered were found in all stages, from eggs to full adults. The conclusion may be drawn that it takes more than one season in this area to produce a complete generation of beetles. Of this year's attacks, only eggs and one-eighth grown larva were found.

CONTROL WORK ACCOMPLISHED

Unit	Number of trees treated	Volume treated
Lost Creek	26	42,350
Noble Pass	16	27,150
Checking Station	34	38,950
Total	76	108,450

Wood cut from "bug trees"	8 cord
Man-days, control	127
Man-days, wood detail	10
Man-days, camp utility	10
Man-days, lost to weather	27
Man-days, lost to sickness	1
Man-days, lost to accident	0
Total man-days	175*

*This does not include one man assigned to cook house.

SUBSEQUENT WORK NEEDED

In order to derive full benefit from the work already done, an early spring survey should be made of the control area, and the Badger Flats, Butte Lake and Summit Lake areas to determine if additional direct control is needed in these areas. No doubt a few trees will show up next spring in the area already worked and since there has been no check on the other areas since September, some infestation may have already developed on them. If any infestation is found, this should be cleaned up in order to secure complete control.

Submitted by:

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C. E. Startt
Control Superintendent

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LASSEN PARK INSECT CONTROL JOB

Oct. 16 to Nov. 25.

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Noble Pass	16	27,150
Checking Station	34	38,950
Total	76	108,450

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